



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,856	11/19/2003	Eric Mics	V8998-6	9502

7590 09/19/2005

GLEN E. BOOKS, ESQ.
LOWENSTEIN SANDLER PC
65 LIVINGSTON AVENUE
ROSELAND, NJ 07068

EXAMINER

HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
	1731

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,856	MICS ET AL.	
	Examiner John Hoffmann	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 August 2005.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-27 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application (PTO-152)
6) Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 August 2005 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1- 6, 11-16 and 15 4, 14, 16 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okude alone, or in view of O'Toole 6336749.

The claims now requires that the end be free. Okude does not disclose this. Okude, first diffuses, and then cleaves/cut the fiber. It would have been obvious to reverse the steps to first cleave and then diffuse.

Art Unit: 1731

C. Changes in Sequence of Adding Ingredients

Ex parte Rubin , 128 USPQ 440 (Bd. App. 1959) (Prior art reference disclosing a process of making a laminated sheet wherein a base sheet is first coated with a metallic film and thereafter impregnated with a thermosetting material was held to render prima facie obvious claims directed to a process of making a laminated sheet by reversing the order of the prior art process steps.). See also In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results); In re Gibson, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious.).

See the prior Office actions for the manner in which the limitations are taught by the references.

Claims 7-10, 17-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okude alone, or in view of Ueda 5372623.

See above and the prior Office actions.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okude alone, or in view of Ueda 5372623 and O'Toole 6336749.

See above and the prior Office actions.

Claims 1- 3, 5, 11-13, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato 6729777.

The Kato abstract (and elsewhere) clearly describes the invention except for the temperature. Lines 1-4 of col. 4 discloses that temperature is a result effective variable.

It would have been obvious to perform routine experimentation to determine the optimal temperature.

2144.05 [R-1] Obviousness of Ranges

II. OPTIMIZATION OF RANGES

A. Optimization Within Prior Art Conditions or Through Routine Experimentation

Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be *prima facie* obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.)

>see also *Peterson*, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); < ** *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969) (Claimed elastomeric polyurethanes which fell within the broad scope of the references were held to be unpatentable thereover because, among other reasons, there was no evidence of the criticality of the claimed ranges of molecular weight or molar proportions.). For more recent cases applying this principle, see *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

B. Only Result-Effective Variables Can Be Optimized

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (The claimed wastewater treatment device had a tank volume to contractor area of 0.12 gal./sq. ft. The prior art did not recognize that treatment capacity is a function of the tank volume to contractor ratio, and therefore the parameter optimized was not recognized in the art to be a result-effective variable.). See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (prior art suggested proportional balancing to achieve desired results in the formation of an alloy).

Claim 2: whether a fiber is a dispersion compensating fiber is a matter of perspective or intended use. From col. 4, lines 22-24 and 50-55, one fiber has a positive dispersion and the other has a negative dispersion. The positive dispersion fiber compensates for

the negative one – or the negative one compensates for the positive one. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Claim 3: See figures 4A-B.

Claim 5: figure 4B shows a loss within the claimed range.

Claims 4, 6, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato alone, or in view of O'Toole 6336749.

Kato does not teach 10-30 minutes. O'Toole is cited as showing different sized fibers (figure 6). It would have been obvious to use the Kato process on any sized fiber. It would have been obvious to perform routine experimentation to determine the optimal time for treatment, depending on the fiber diameter, dopant, and temperature. One realizes that a larger fiber takes more time for treatment – because the larger the fiber, the further the diffusing dopant needs to travel and the longer it takes. And that

different dopants have different coefficients of diffusion and that higher lower temperatures require longer to occur.

Claim 6: Kato does not disclose that the fiber has a 1 mm dimension or a 6 mm dimension. Figure 6 of O'Toole shows that to taper the fiber. It would have been obvious to create a taper of 1 mm to 6 mm if one wishes to splice a 1 mm diameter fiber to a 6 mm diameter fiber. Alternatively, to have the core taper from 1 mm to 6 mm if that is the diameter of the fiber cores that one has.

Claim 14 and 16 are similarly met.

Claims 7-10, 17-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato alone, or in view of Ueda 5372623.

Ueda is cited as showing that methanol is a known fuel for treating gas (col. 7, lines 1-4.) It would have been obvious to use methanol or whatever fuel is most economical/practical to use in the Okude process, because such is the mere substitution of one known fuel for another.

It is noted that special results are attributed to the use of methanol. Examiner did not see any evidence of new and unexpected results. Applicant is reminded that a showing of unexpected results must be attributed to the entire scope of the claims – and not just a particular embodiment.

Claims 17-23 and 25-27 are similarly met.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okude alone, or in view of Ueda 5372623 and O'Toole 6336749.

See the reasons given above.

Response to Arguments

Applicant's arguments filed have been fully considered but they are not persuasive.

It is argued that the rejection is improper because Okude does not disclose all limitations. Specifically, it is argued that Okude does not have the step of "heating an end of the optical fiber". This is not convincing, because the end of an Okude fiber is clearly heated. It is requested that Applicant point out how it could be possible to practice the Okude method without heating an end of the fiber.

It is further argued that Okude teaches heating the area of connection between the fibers. And that this "clearly means" that a connection has been formed between the fibers and heat is being applied to the interior spliced region. First examiner does not agree with Applicant's assertion as to what Okude "clearly means". However, it is largely immaterial because the claim does not preclude having a connection on the end which is heated. Although applicant may disclose not having a connection/splice, such is largely irrelevant because the claims are broad and are open to having a connection during the heating step.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In other words, Applicant's argument that O'Toole not having the step of heating the end is not very important: the rejection does not suggest or state that O'Toole supplies that teaching. Okude is the basis for the teaching.

It is further argued that neither Okude nor Ueda suggests expanding the mode filed diameter by applying heat from an organic liquid. As indicated above one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Applicant has not pointed out how the combination of references as set for in the rejection is improper.

With regard to the argued unexpected results allegedly shown in the specification , it is noted that applicants bear the burden of establishing that the claimed subject matter in fact imparts unexpected properties. See *In re Klosak*, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). However, Examiner is not satisfied that the evidence of record offered for comparison demonstrates results that are truly unexpected and commensurate in scope with the claims. It is deemed that applicant have not met their burden of explaining how the results reported in the specification can be extrapolated from the limited instances presented so as to be guaranteed as attainable through practicing the invention as broadly claimed. Moreover, applicant have not met their burden of establishing that the reported bonding results would have been truly

unexpected to a person of ordinary skill in the art. MOST importantly, Examiner is unsure as to what result applicant is referring to. Examiner cannot adequately consider unexpected results if Examiner is not clearly informed as to what results Applicant is referring to. Additionally it is noted that there is no "Example 1" in the present specification, although Examiner assumes it to be the sole Example starting on page 6. Examiner could not find any unexpected results in the example – nor any result that is asserted to be unexpected. To reiterate from the previous action: examiner cannot find new and unexpected results. Applicant is required to specifically and clearly (by page, and line number) all evidence which supports applicant's assertion of new and unexpected results.

Response to Arguments

Applicant's arguments filed 25 April 2005 have been fully considered but they are not persuasive.

The arguments regarding the end being "free" are moot in view of the new grounds of rejection.

With regard to the argued unexpected results of "near ideal temperature profile" and "burns clean" allegedly shown in the specification, it is noted that applicants bear the burden of establishing that the claimed subject matter in fact imparts unexpected properties. See In re Klosak, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). However, Examiner is not satisfied that the evidence of record offered for comparison demonstrates results that are truly unexpected and commensurate in scope with the

claims. In fact, there is no evidence of any comparison at all. There is no reason to expect that the prior art fuels couldn't also create a near ideal temperature profile and burns clean. In fact, Examiner doubts such is possible. The prior art usage of an oxy-hydrogen flame would be just as clean burning as applicant's flame – if not cleaner – because an oxy-hydrogen flame would only produce water (as applicant's invention does). Applicant's assertion that clean burning is a new result is not well taken.

It is also noted that none of the appeal claims are limited to the embodiments of appellants' specification which require the use of a fiber with –100ps/nm/km at 1550 nm and MFD of 5 micron, using a fiberglass wick of 1/16 inch diameter for 20 minutes, then splicing to a standard SM fiber with MFD of 10.5 microns using a Vytran FFS-2000a. It is deemed that applicant have not met their burden of explaining how the results reported in the specification can be extrapolated from the sole example presented so as to be guaranteed as attainable through practicing the invention as broadly claimed. Moreover, applicant have not met their burden of establishing that the reported bonding results would have been truly unexpected to a person of ordinary skill in the art. In this regard, it is noted that applicants have not furnished any detailed data regarding the actual experiments run with different fuels. It is well established that the evidence relied on to establish unobviousness must be commensurate in scope with the claimed subject matter. See In re Kerkhoven, 626 F.2d 846, 851, 205 USPQ 1069, 1072-1073 (CCPA 1980) and IN re Clemens, 622 F.2d 1029, 1035, 206 USPQ 289, 296 (CCPA 1980).

Most notably, examiner presumes that the "near ideal temperature profile" is heavily dependant upon the size of the wick. Clearly a wick of 1/64 inch would have a completely different profile than a wick of 1/2 inch. Nevertheless, Examiner need not demonstrate such. The burden is upon applicant to demonstrate that the purported new result could be extrapolated to cover all wick sizes, all fiber types, fiber sizes etc. Because the claim encompasses all of them.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Shiraishi article is cited as being cumulative to Kato.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John Hoffmann
Primary Examiner
Art Unit 1731

9-14-05

jmh